AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the present application:

1. (Currently Amended) An objective optical system configured to be implemented in a tip of an endoscope, the system comprising:

a first lens unit having a first lens barrel and a first optical system including a plurality of lens elements assembled in said first lens barrel and aligned in a direction of a first common optical axis; and

a second lens unit having a second lens barrel, engageable with said first lens barrel, and a second optical system including a plurality of lens elements aligned in a direction of a second common optical axis,

wherein, when the first lens barrel is engaged with the second lens barrel, the lens elements of the first and second lens barrels are aligned along a common axis, the first common axis and the second common axis comprising the common axis

wherein said first lens unit includes an alignment lens movable in a direction perpendicular to an optical axis thereof, movement of the alignment lens in the direction perpendicular to the optical axis alone adjusting an alignment of the entire plurality of lens elements assembled in the first lens unit, said first lens barrel being formed with a plurality of unthreaded holes through which parts of a circumferential surface of said alignment lens are exposed, said alignment lens [[is]] being movably accommodated in said first lens barrel, and said alignment lens [[is]] being moved, in the direction perpendicular to the optical axis, by pins inserted through said plurality of holes, respectively.

2. (Previously Presented) The objective optical system according to claim 1, wherein said first lens unit is provided with a fixing unit that fixes said first optical system to said first lens barrel, said second lens barrel being assembled to said first lens barrel, said fixing unit being interposed between said first lens barrel and said second lens barrel to define a clearance therebetween.

3-5 (Canceled)

6. (Previously Presented) The objective optical system according to claim 1, wherein said alignment lens is more sensitive to an alignment error than all of the plurality of lens elements included in said first optical system.

7. (Previously Presented) The objective optical system according to claim 1, wherein said alignment lens is more sensitive to an alignment error than all of the lens elements included in said objective optical system.

8. (Original) The objective optical system according to claim 7, wherein said alignment lens is a cemented lens.

9. (Original) The objective optical system according to claim 1, wherein said first lens barrel is attached to said second lens barrel by a screw connection.

10. (Currently Amended) A method of assembling an objective optical system that is configured to be implemented in a tip of an endoscope, the method comprising:

forming a first optical system by assembling a first plurality of lenses in a first lens barrel such that the first plurality of lenses are aligned in a direction of a first common optical axis, the first lens barrel being formed with a plurality of unthreaded holes on a circumferential surface thereof, the plurality of holes allowing access to a predetermined one of the first plurality of lenses in the first lens barrel and through which parts of a circumferential surface of the predetermined one of the first plurality of ~~lens~~ lenses are exposed;

forming a second optical system by assembling a second plurality of lenses in a second lens barrel which is to be coupled to the first lens barrel such that the second plurality of lenses are aligned in a direction of a second common optical axis;

inserting rods through the plurality of holes to move the predetermined one of the first plurality of lenses in the first lens barrel to adjust an alignment thereof in a direction perpendicular to an optical axis thereof, movement of the predetermined one of the first plurality of lenses in the first lens barrel alone adjusting the alignment of the entire first plurality of lenses in the first lens barrel;

fixing the predetermined one of the first plurality of lenses to the first lens barrel; and

coupling the first lens barrel and the second lens barrel such that the first optical system and the second optical system have a common optical axis, and the first plurality of lenses and the second plurality of lenses are aligned along the common optical axis.

11. (Previously Presented) The objective optical system according to claim 1, wherein a threaded portion is provided on an inner surface of the first lens barrel which engages with a screw provided on an outer surface of the second lens barrel.

12. (Currently Amended) The objective optical system according to claim 1, the unthreaded holes ~~been~~ being configured to receive unthreaded pins that bear against the circumferential surface of the alignment lens.

13. (Previously Presented) The objective optical system according to claim 1, the optical system being configured such that the pins are removed from the holes after the alignment lens is aligned by the pins bearing against the circumferential surface of the alignment lens.

14. (Previously Presented) The objective optical system according to claim 1, wherein a plurality of unthreaded holes are circumferentially spaced about the circumferential surface of the alignment lens.

15. (Previously Presented) The method according to claim 10, wherein inserting rods through the plurality of holes comprises inserting unthreaded rods through the holes to bear against the circumferential surface of the predetermined one of the first plurality of lenses.

16. (Previously Presented) The method according to claim 10, wherein inserting rods through the plurality of holes comprises removing the rods from the holes after the

predetermined one of the first plurality of lenses is aligned by the rods bearing against the circumferential surface of the predetermined one of the first plurality of lenses.

17. (Previously Presented) The method according to claim 10, further comprising locating the plurality of unthreaded holes circumferentially spaced about a circumferential surface of the predetermined one of the first plurality of lenses.

18. (New) The objective optical system according to claim 1, a clearance between the first lens barrel and the alignment lens being greater than a clearance between the first lens barrel and the plurality of lens elements of the first lens unit.

19. (New) The method of assembling an objective optical system according to claim 10, the forming of the first optical system further comprising providing a clearance between the first lens barrel and the predetermined one of the first plurality of lenses to be greater than a clearance between the first lens barrel and the other lenses of the first plurality of lenses of the first optical system.

20. (New) The objective optical system according to claim 1, wherein the unthreaded holes are sized so as to expose the parts of the circumferential surface of the alignment lens without exposing a portion of the circumferential surface of the plurality of lens elements of the first lens unit.

21. (New) The method of assembling an objective optical system according to claim 10, the forming of the plurality of unthreaded holes comprises forming a size of the plurality of holes so as to allow access to a circumferential surface of the predetermined one of the first plurality of lenses in the first lens barrel without permitting access to the circumferential surface of the other ones of the first plurality of lenses in the first lens barrel.

22. (New) The objective optical system according to claim 1, each of said pins being configured to bear against the circumferential surface of the alignment lens while being biased away from the circumferential surface of the alignment lens.

23. (New) The method of assembling an objective optical system according to claim 10, wherein inserting the rods comprises arranging the rods to bear against the circumferential surface of the predetermined one of the first plurality of lenses while being biased away from the circumferential surface of the predetermined one of the first plurality of lenses.